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*Not seen in original.

NEW AND NOT KNOWN APHIDS (HOMOPTERA : APHIDIDAE) FROM HIMACHAL PRADESH, INDIA[1]

D.K. BHATTACHARYA[2]

(With four text-figures)

Four species of aphids (Homoptera : Aphididae) are recorded from the State of Himachal Pradesh, India. Among these, one, *Eumyzus simlaensis* is new and three species, *Anoecia nemoralis*, *Myzus formosanus* and *Pemphigus mordvilkoi* are new to Himachal Pradesh.

INTRODUCTION

Altogether 251 species of aphids are so far known from Himachal Pradesh, Chowdhury *et al.* (1969), Bindra and Sekhon (1969), Ghosh *et al.* (1969), Chakrabarti *et al.* (1970, 1974), Bhalla (1971), Raychaudhuri *et al.* (1980), Das *et al.* (1981), Chakrabarti and Bhattacharya (1982) and Ghosh (1986).

In this paper four more species are added to the list and the total number of species from the area stands at 255. Among these newly recorded species one, *Eumyzus simlaensis* is new to science. The rest are recorded for the first time from the State.

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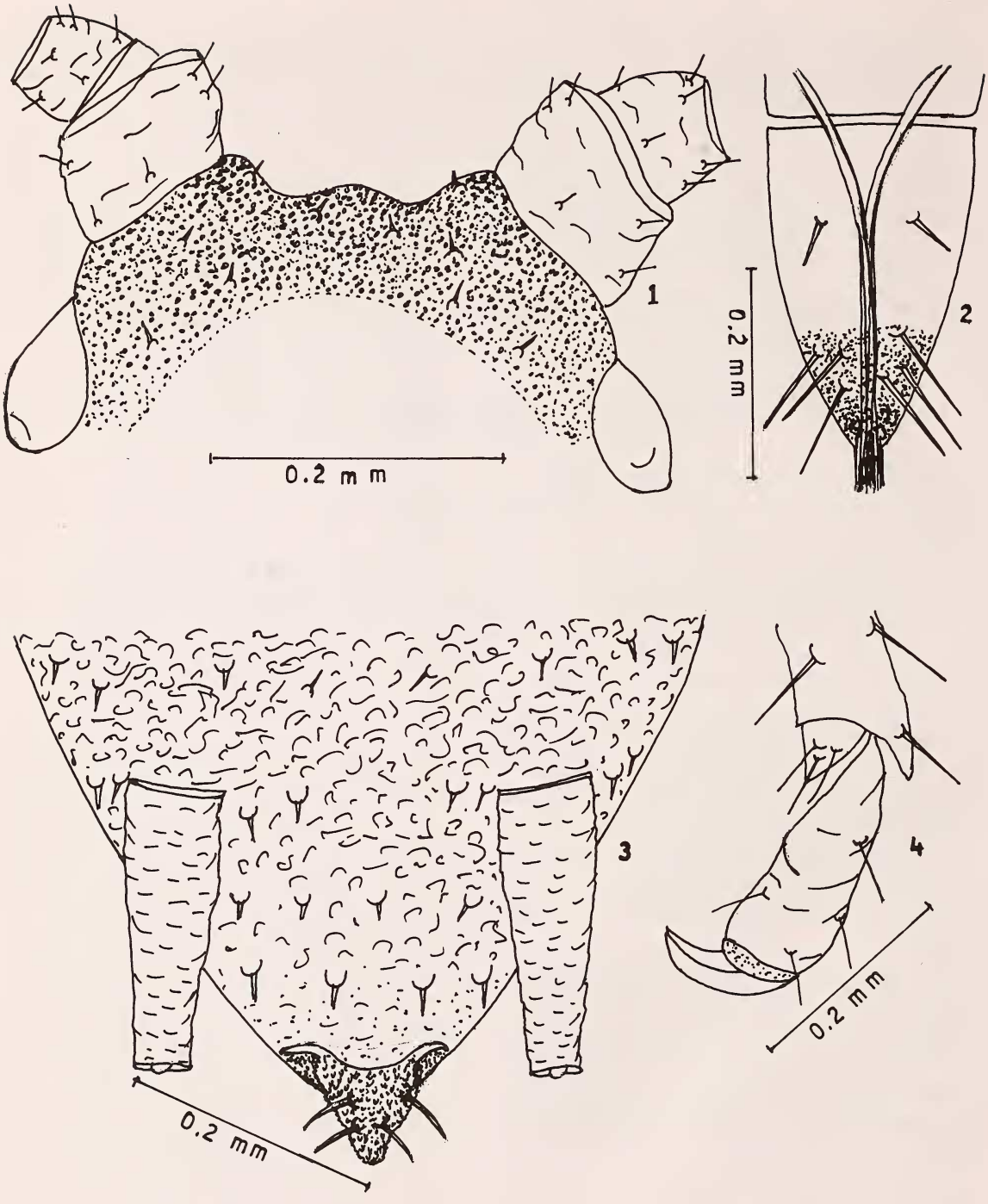
1. **Eumyzus simlaensis** sp. nov.
(Figs. 1-4)

Apterous viviparous female: Body 1.41-1.48 mm long and 0.76-0.78 mm wide. Head brown strongly spinulose both dorsally and ventrally; frons moderately developed with well developed but diverging lateral frontal tubercles; dorsum with 5-6 pairs of short hairs with bluntish apices; longest hair on vertex 0.011-0.018 mm long and 0.5-0.6 times as long as basal diameter of antennal segment III. Antennae 6-segmented with basal two segments little darker than head, but rest of the flagellum pale, 0.60-0.70 times as long as body; segment I and II little scabrous and with 6 and 5 hairs, longest one on segment III 0.50-0.60 times as long as basal diameter of the segment, flagellum gradually and distinctly imbricated apicad; processus terminalis 3.50-3.70 times as long



Figs. 1-4. *Eumyzuz simlaensis* sp. nov.
1. Head; 2. Ultimate rostral segment; 3. Posterior part of abdomen; 4. Second joint of hind tarsus.

as base of the segment VI. Rostrum reaching mid coxae, ultimate rostral segment 1.12-1.30 times second joint of hind tarsus and with 2 hairs. Thorax distinctly scabrous, mid-thoracic furca with a short base. Abdomen brown strongly corrugated, dorsal hairs moderately long with bluntish apices and placed on tuberculate bases; anterior tergites with 8-10 hairs, longest hair on anterior tergites 0.5 times as long as basal diameter of the antennal segment III; tergites 7 and 8 with 5 and 4 hairs, longest hair on each of these tergites 0.50-0.52 times and 0.52-0.53 times as long as basal diameter of the antennal segment III, respectively. Venter with rows of spinules, ventral hairs shorter than dorsal hairs. Siphunculi subcylindrical, brown, poorly imbricated with a distinct flange, 0.20-0.21 times the body length and 0.37-0.40 times the length of cauda. Cauda dark some what buldging anteriorly with a constriction near the apex, bearing 4 hairs. Subgenital plate with 2 hairs on anterior margin and 16-18 hairs on the posterior margin. Legs pale; femora smooth except some corrugations on the apex; tibiae smooth; first tarsal chaetotaxy 3,3,3.

Measurement of the holotype in mm: Length of the body 1.45; width 0.79; antenna 1.01, antennal segments III:IV:V:VI : 0.24:0.13: 0.11: (0.07 + 0.29); u.r.s. 0.08; h.t 2. 0.07; siphunculus 0.06; cauda 0.02.

Holotype: Apterous viviparous female, INDIA: Himachal Pradesh, Simla, 21.ix.1987 from *Prunus* sp. (coll. D.K. Bhattacharya).

Paratypes: 8 apterous viviparous female and many nymphs, collection data as in holotype. The type material of the new species have been deposited at present in the collecction of Entomology laboratory, Department of Zoology, University of Kalyani.

Remarks: The new species by possessing diverging lateral frontal tubercles, dorsal abdominal hairs placed on tuberculate bases with blunt apices and siphunculi without reticulate apex comes under the genus *Eumyzus* Shinji (Chakrabarti and Bhattacharya 1985).

The species in having ultimate rostral segment longer than second joint of hind tarsus bearing 2 hairs, dorsum of abdomen strongly corrugated and dorsal hairs placed on tuberculate bases comes close to *eastopi* (Maity *et al.* 1982) but it differs from the later in having shorter 1.12-1.30 u.r.s. and h.t. 2 ratio (1.68-1.90 in *eastopi*), 4 caudal hairs (6 in *eastopi*) and F.T.C. 3,3,3 (3,3,2 in *eastopi*).

2. **Anoecia nemoralis** Börner

Anoecia nemoralis Börner, 1950, *Neure suropaische Blattlausarten*, 17; Halmgrund (East Germany; England; Netherland); Zwölfer, 1957, *Z. Angew. Ent.*, 40: 214. *Anoecia nemoralis* Börner; Chakrabarti, Maity and Bhattacharya, 1982, *Oriental Insects*, 16 (1): 99-111.

Material examined: 10 apterous viviparous female, 2 alate viviparous female and nymphs, INDIA; Himachal Pradesh; Narkanda 23.ix.1987 from *Triticum* sp. roots (coll. D.K. Bhattacharya).

3. **Myzuz formosanus** Takahashi

Myzus formosanus Takahashi 1923 *Aphididae of Formosa* 1. Part II: 11.

Myzus formosanus Takahashi; Bhattacharya, Mandal and Chakrabarti, 1983. *Entomon*, 8(1): 16.

Material examined: 7 apterous viviparous female and nymphs, INDIA: Himachal Pradesh : Summer hills, 22.ix.1987 from *Impatientinum balsamina* (coll. D.K. Bhattacharya).

4. **Pemphigus mordvilkoi** Cholodkovsky

Pemphigus mordvilkoi Cholodkovsky, 1912. *Rev. Russ. Ent.*, 12 : 493. Ghosh, Chakrabarti and Bhattacharya, 1981. *Bull. Zool. Surv. India*, 4(3) : 320.

Material examined: 15 alate viviparous females and nymphs, INDIA: Himachal Pradesh, Simla, 21.ix.1987 from *Populus ciliata* (coll. D.K. Bhattacharya).

The species were obtained from stem galls of the host plant.

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ON A NEW SPECIES OF *ZELOMORPHA* ASHMEAD (HYMENOPTERA : BRACONIDAE) FROM INDIA[1]

S.M. KURHADE[2] AND P.K. NIKAM[3]

(With three text-figures)

INTRODUCTION

Zelomorpha Ashmead is a small but widely distributed genus in the Nearctic, Ethiopian, Neotropical and Indo-Australian regions. Shenefelt (1970) recorded twelve species in the world fauna, of which four species are Oriental. According to Bhat and Gupta (1977) eighteen species are reported from the Oriental region, from which ten species are from India. In the present work, a new species, *Zelomorpha guptai* is

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